

40038-0001

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IN THE CLAIMS

The status and content of each claim follows.

1-8. (cancelled)

9. (original) A conductor roll for electroplating steel sheets, comprising:
a central portion with a metal-containing surface;
intermediate portions with a ceramic surface; and
end portions with a rubber surface.

10. (original) The conductor roll of claim 9, wherein the ceramic surface
comprises ceramic oxide materials.

11. (original) The conductor roll of claim 10, wherein the ceramic oxide
comprises alumina, zirconia, chromia, or a combination thereof.

12. (original) The conductor roll of claim 11, wherein the ceramic oxide further
comprises titania.

13. (original) The conductor roll of claim 11, wherein the zirconia further
contains MgO, CeO₂, Y₂O₃, or a combination thereof.

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14. (original) The conductor roll of claim 9, wherein the width of the intermediate portions is greater than 10 mm.

15. (original) The conductor roll of claim 9, further comprising a seal over the ceramic surface.

16. (original) The conductor roll of claim 9, wherein the intermediate portion comprises a metal-containing substrate with a ceramic coating having a thickness ranging from about 0.2 mm to about 2 mm.

17. (withdrawn) An electroplating system containing a conductor roll comprising: a central portion with a metal-containing surface; intermediate portions with a ceramic surface; and end portions with a rubber surface.

18. (withdrawn) The system of claim 17, wherein the intermediate portion comprises a metal-containing substrate with a ceramic coating.

19. (withdrawn) The system of claim 17, further comprising a seal over the ceramic surface.

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20. (withdrawn) A method for making a conductor roll for electroplating steel sheets, comprising:

providing a central portion with a metal-containing surface;
providing intermediate portions with a ceramic surface; and
providing end portions with a rubber surface.

21. (withdrawn) The method of claim 20, wherein the intermediate portion comprises a metal-containing substrate with a ceramic coating.

22. (withdrawn) The method of claim 21, including providing the ceramic coating on the metal-containing substrate by spray coating a ceramic-oxide material on the substrate.

23. (withdrawn) The method of claim 22, further including spray coating by using plasma spray-coating.

24. (withdrawn) The method of claim 22, including spray coating for a time sufficient to form a coating with thickness ranging from about 0.2 to about 2 mm.

25. (withdrawn) The method of claim 22, including spray coating over an area of the metal-containing substrate to form a coating with a width greater than about 10 mm.

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26. (withdrawn) The method of claim 20, further including providing a seal over the ceramic surface.

27. (withdrawn) The method of claim 21, further including spray coating a metal coating on the metal-containing substrate before providing the ceramic coating.

28. (withdrawn) The method of claim 27, wherein the metal of the metal coating and the metal-containing substrate are the same.

29. (withdrawn) A method for using a conductor roll, comprising:
providing a conductor roll having a central portion with a metal-containing surface, intermediate portions with a ceramic surface, and end portions with a rubber surface;
immersing the conductor roll in a plating solution; and
rolling a stainless steel sheet over the conductor roll.

30. (withdrawn) The method of claim 29, wherein the method electroplates a material in the plating solution on the stainless steel sheet.